COMMENT ON THE PROPOSED SUPPRESSION OF THREE *NOMINA OBLITA* IN THE FAMILY BELONIDAE (PISCES). Z.N.(S.) 1723

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In my revisions of the family Belonidae (Mees 1962, 1964), it was demonstrated that several species of this group are far wider ranging than was previously known. One of the results of this was a great simplification in nomenclature: species which previously, in different parts of their range, had been known by different specific names, and sometimes even as different genera, retained one name throughout their ranges. In actual figures, the family Belonidae was reduced from a lowest estimate of some sixty species (for which twenty generic names were available) to twenty-four species, divided over two genera. Over thirty specific names were placed in synonymy for the first time. With such a drastic reduction of species, inevitably many changes in nomenclature were necessary. Sometimes a single species had been known by five and more names in different parts of its range, each name being well-established and " in general use " in a certain region. Basing myself on the principles of priority and clarity of description (some names date from 150 and more years ago, a time when few species of Belonidae were known and the importance of certain characters was not yet realized), I have used the names that on this basis appeared to be the best ones. As each of these old names has a different history, I had to make a separate decision for each name and species, and though I have tried to be consistent, subjectivity could not altogether be avoided: a name rejected by another worker as unidentifiable might be acceptable to me, or vice versa, but I have in each instance clearly stated my reasons for accepting one name and rejecting as unidentifiable another.

Collette & Berry (1965, 1966) disagree with many of my decisions, and have proposed suppression of three specific names I have used. Their proposals are largely based on Art. 23b of the Code, which at present it is proposed to suspend, as it was found to be unworkable (cf. Smith, 1964; Robins, 1965). I shall discuss these names, and two others which have been accepted by Collette & Berry, though they had been rejected by me. As Collette & Berry have presented very ably one side of the picture, I shall try to present the other point of view, so that the Commission can consider both, and make its decisions accordingly.

Esox imperialis Rafinesque, 1810

This name was accepted by me as *Belone imperialis* (Rafinesque), as it was based on a *Belone* species in the Mediterranean which was described as much larger and rarer than the common *Belone bellone*. There are some discrepancies in the description (the number of finrays in D and A as given is too high), but as only two species of *Belone* were known from the Mediterranean, and the species under discussion reaches a length of over 1·50 m, it appeared recognizable*.

Collette & Berry have since mentioned the occurrence of *Belone marisrubri* in the Mediterranean, which would invalidate one of my arguments. Unfortunately they do not give any particulars about this interesting record. *Belone marisrubri* was not recorded for the Mediterranean by Tortonese (1964), and as the species is very common in the Red Sea one might assume that it has recently reached the Mediterranean through

* Collette & Berry (1966: 327) came with the amazing statement that: " . . . a large proportion of the museum specimens of *Belone belone* [recte: *Belone bellone*] and *Tylosurus acus* that we have examined have been misidentified, so we see no reason to assume that Rafinesque necessarily distinguished between them ". Rafinesque (1810), as well as Mongitore (1743), and Cirino (1653), to whom Rafinesque referred, made quite clear that they knew the ordinary *Belone bellone*, and distinguished a second much larger species from it. Full quotations of the relevant passages in these somewhat scarce publications can be found in my revisions (Mees, 1962: 40–41, 1964: 319–320). One wonders if Collette & Berry found so many specimens in collections apparently misidentified because they did not realize that many specimens of *Belone bellone* in collections are labelled as *Belone acus* Risso, not *acus* (La Cepède).

the Suez Canal. The name *Belone imperialis* dates from many years before the Suez Canal was opened. A point in favour of *B. imperialis* is also that it is this species which amongst Italian fishers is known as Aguglia Imperial, the common name also mentioned by Rafinesque and in older literature. The official Spanish name is Aguja imperial (Rey, 1947: 603).

Collette & Berry (1966: 327) have proposed rejection of the specific name *imperialis* not on the basis of inapplicability, but as: " The name *imperialis* has apparently not been used as a senior synonym since its original description, except by Mees (1962, 1964) and Tortonese (1963) ".

As Collette & Berry refer to Tortonese (1963), it is difficult to understand how they arrived at their opinion, for in the paper mentioned reference is made to the following publications in which the name *imperialis* (Rafinesque) is used as the name of the species under discussion: Moreau, 1881; Vinciguerra, 1885; Carus, 1893; D'Ancona, 1931; Tortonese & Trotti, 1949; Lanfranco, 1958. To show that there was not a gap in its use between 1810 and 1881, I further mention Bonaparte (1849). Several of these publications refer to more literature in which the names *Belone imperialis* (Rafinesque) or *Tylosurus imperialis* (Rafinesque) have been used, and far from being a *nomen oblitum* (Collette & Berry, 1965: 391) it appears that the specific name *imperialis* has been in almost continuous use for a century and a half, and is the name that has been the most widely used for the species under discussion in publications dealing with the fish fauna of the Mediterranean. It has also been used for the species in West-Africa (Cadenat & Marchal, 1963: 1303). A further strong point in its favour is that, to the best of my knowledge, it has never been misapplied.

Sphyraena acus La Cepède, 1803

Collette & Berry have advocated the use of *Sphyraena acus* La Cepède, 1803, for the species called *Belone imperialis* by me. My reasons for rejecting the name have been given in full (Mees, 1962: 69–70). When La Cepède proposed the name, based on one of Plumier's drawings, he believed it to be a *Sphyraena*. The name was assigned to the proper genus by Valenciennes (in Cuvier & Valenciennes, 1846: 319), who noted that the species was: " tout-à-fait impossible à déterminer ". At this the matter was left until 1887 when Jordan & Fordice considered it " probable " that *Sphyraena acus* was applicable to this species. That they were still uncertain about the species involved is apparent from the fact that they distinguished it from " *Tylosurus caribbaeus* " which is the same species. In North American literature, Jordan & Fordice have been followed widely, the words " probable " and " without much doubt " which accompany their opinion being deleted by later workers.

Collette & Berry have proposed placing the name *Sphyraena acus* on the Official List of Specific Names in Zoology, though admitting that it is " poorly described ". Doubtless they suppose that this will best serve stability. However, as I have already demonstrated in the discussion of *Esox imperialis*, they are not sufficiently familiar with the European literature, for in Europe is a *Belone acus* Risso, 1826, which, though a synonym of *Belone bellone*, has been used very extensively in European literature (perhaps sometimes to avoid tautonymy). Thus there was a *Belone acus* in literature twenty years before Valenciennes placed *Sphyraena acus* La Cepède in the genus *Belone*. Superfluous to say that *Belone acus* Risso and *Belone acus* (La Cepède) are different species, and that introduction of the name *acus* (La Cepède) into European literature will lead to considerable confusion, and has done so already (Albuquerque, 1954: 439). There are literally hundreds of references to *Belone acus* Risso in literature, in popular and semi-popular literature, and also in scientific literature at least up to 1955 (Svetovidov, 1955).

Even subsequent to Jordan & Fordice (1887) the name *acus* (La Cepède) has been interpreted differently, for example by Metzelaar (1919), and moreover the name *caribbaea* (lapsus for *carribaea* Lesueur) continued to be used.

Esox belone Var. *Maris rubri* Bloch & Schneider, 1801

There is no doubt about the identity of the name *marisrubri*, which was based on a description by Forskål, but Collette & Berry have asked for its suppression in order to

save *Belona crocodila* Lesueur, 1821, which is a synonym twenty years its junior.

The species listed as *Belone marisrubri* in my revisions is of circumtropical distribution, a fact that had not previously been recognized. Names in general use for it were: *crocodila* Lesueur, 1821 (Indo-Pacific), *choram* Rüppell, 1837 (Red Sea and Indian Ocean), *raphidoma* Ranzani, 1842 (Atlantic and West Indies), *annulata* Valenciennes, 1846 (Indo-Pacific), *gigantea* Temminck & Schlegel, 1846 (Indo-Pacific), *robusta* Günther, 1866 (Red Sea, east coast of Africa), *fodiator* Jordan & Gilbert, 1882 (East Pacific). Less often the names *coromandelica* van Hasselt, 1823, *timucoïdes* van Hasselt, 1824, and several others are found in literature.

Here is an instance where over a large part of its range the name of the species had to be changed anyway, and where I have used an almost forgotten name (*marisrubri*), on the grounds of clear priority over any of the many names in current use.

Collette & Berry have proposed suppression of the name *marisrubri*, in order to save for use, from the array of available names, the next one in seniority, *Belona crocodila* Lesueur, which they correctly claim has been widely used in literature. They specifically mention its use by Weber & de Beaufort (1922) and in other well-known handbooks. The situation is however far more complicated than as presented by them. Collette & Berry's proposal could easily give the impression that *crocodila* was the most used name for the species in the Indo-Pacific, but in fact the two names most generally used in this area are *annulata* Valenciennes, 1846, and *gigantea* Temminck & Schlegel, 1846. Weber & de Beaufort (1922) for example stated quite clearly that they had not personally examined specimens they could ascribe to *crocodila* and that their description was entirely compiled from literature. The same pertains to several other works: *crocodila* was but compiled from literature, and for actual material the names *gigantea* and *annulata* were used, disagreement existing as to which of these two names, both published in 1846, had priority. In more recent years Fowler (1922) has also revived the name *Belona indica* Lesueur, 1821, for this same species, in which he has found some following (Munro, 1958). The name *indica* is in my opinion indeterminable, but it was proposed in the same paper as *Belona crocodila* and adds to the general confusion.

Where such confusion exists, I certainly believe that it is preferable by far to follow the law of priority and use the name *Belone marisrubri* Bloch & Schneider, rather than arbitrarily select *Belone crocodila*, a name that in recent literature has almost universally been misunderstood. The facts that the identity of *B. marisrubri* is certain, and that it has twenty years priority over the next available name, which gives it a greater chance of survival in case other old names are found in future, add to the arguments in its favour.

Since the publication of my revision, the name *marisrubri* has been used by Woodland & Slack-Smith (1963) and Whitley (1964).

Belona argalus Lesueur, 1821

This is also a name which I have discussed and rejected (Mees, 1962: 70–71). There is very little I can add to my earlier notes. Collette & Berry (1965: 391) remark that: " the number of fin rays given in the text is correct .....". Previously I had only cautiously observed that: " ..... the finray numbers D 16, A 19 are rather high for *B. platyura* in the West Indies ". In 28 specimens from the West Indies the maximum finray number I found was D 14, A 19 and the maxima recorded by Berry & Rivas (1962) for this region, in as far as I can make out 26 specimens, are the combinations D 14, A 19 and D 15, A 18. Therefore not a single one of 54 specimens examined has the finray formula presented by Lesueur, and though it is very well possible that finray numbers as high as recorded by Lesueur do occasionally occur, it is far fetched, in view of the other discrepancies of the description, that Lesueur would have had such an exceptional individual.

Collette & Berry (1965: 391) have taken out of its context a remark made by me, and state that Lesueur's figure shows a depressed caudal peduncle. In the text, however, Lesueur compares the caudal peduncle with that of *B. truncata* (= *B. houttuyni* of my revisions), and the finray numbers given by him, D 16, A 19, agree also with that species, in which I found D 13–17, A 16–19.

Therefore I see no reason to alter my previous opinion that: " Perhaps the most likely explanation of the many discrepancies in text and figure is that both are composite, assembled from different field notes and sketches."

In this connection I do not quite understand why Collette & Berry choose to defend the name *argalus*, when elsewhere they reject names for the simple reason of having been rarely used. For in the whole Indo-Pacific this species has for long been generally known as *Belone platyura* Bennett, 1832, the name also used by me, and in the West-Indies the name in general use was *Strongylura* (or *Tylosurus*) *ardeola*. The name *Belone argalus* was introduced for this species by Fowler (1919), and subsequently used only a few times. As I have demonstrated (Mees, 1962: 37) the name *Belone ardeola* Valenciennes, 1846, almost certainly applies to *Belone houttuyni*, but anyway, *Belone platyura* Bennett has clear priority over it, and is the name that has had by far the widest use in literature, not only in the Indo-Pacific, but also in the Eastern Atlantic (Cadenat & Marchal, 1963; Cadenat & Roux, 1964) so that it is fortunate that it can be retained for the species.

Esox Houttuyni Walbaum, 1792, versus *Esox marinus* Walbaum, 1792

These two names, together with a third one that might apply to the same species, were published in the same work on the same page. As first reviser to consider these names and recognize their synonymy, I exercised my rights in selecting *Esox Houttuyni* as the valid name. This was not only for chauvinistic reasons (Collette & Berry, 1965: 390), but mainly for the very good reason that, while Houttuyn's description and figure, on which *Esox Houttuyni* was based, are good and can readily be identified as referring to this species, the description on which *Esox marinus* was based does not make sense at all, and was regarded as identifiable only because of its type-locality, New York, as there is apparently only one common species that far north. In accepting *Esox marinus* as applicable I was only consistent as I had accepted *Esox Imperialis* also partly on geographical evidence, though the additional evidence supporting the last-mentioned name is far better than that for *Esox marinus*. As, however, a choice could be made, naturally I selected the name based on the best description, and not open to the chance of different interpretation in future.

It is true, as Collette & Berry pointed out, that the names *Strongylura marina* and *Tylosurus marinus*, derived from *Esox marinus* Walbaum have been much used in literature, but it was by no means the only name applied to the species. In the Americas, the name *timucu* has been used almost or quite as often*, and also in use are the names *almeida*, *truncata*, and *galeata*. In Africa the name most often used for the species is *Belone senegalensis* Valenciennes, 1846.

Collette & Berry (1965: 390) have quoted as " ... an even more remarkable statement " my opinion (Mees, 1962: 36) that " ... many names in the genus *Belone* have so often been misused that it is perhaps an advantage to have a set of nomenclatorially clean names available to replace them ". Contrary to Collette & Berry I do not see why this statement is so remarkable. Once a name has been used in literature for several different species, either because of repeated misidentification, or because of disagreement about the identity of the species originally described, it loses its primary use as a short indication of which species an author is referring to. I believe therefore that in a group as the Belonidae, which was in a chaos, it is fortunate that I have found some old names, like *Belone houttuyni* (Walbaum) and *Belone marisrubri* (Bloch & Schneider), which on the one hand have clear priority, and on the other hand are not loaded down with misapplications and misinterpretations.

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* In this connection it is interesting to point out that though Berry & Rivas (1962) call the species *Strongylura marina* in their text, in the abstract in bold printing which precedes their article they call it *Strongylura timucu*. Surely nothing but a slip, but a highly significant one, which shows that the name *timucu* was as familiar to them and as much in their mind as the name *marina!* I regard *Esox timucu* Walbaum, based on Marcgrav, as impossible to identify (Mees, 1962: 73–74).

Subsequent to the publication of my revision, the name *Belone houttuyni* (Walbaum) has been used by Boeseman (1963), Cadenat & Marchal (1963), Cadenat & Roux (1964), and Daget & Iltis (1965).

In conclusion I would counter Collette & Berry's proposal by proposing that the International Commission:

(1) use its plenary powers to suppress for the purposes of priority but not for those of homonymy the following specific names:
  (*a*) *acus* Lacépède, 1803, as published in the combination *Sphyraena acus;*
  (*b*) *argalus* Lesueur, 1821, as published in the combination *Belona argalus;*
(2) place the following names on the Official List of Specific Names in Zoology:
  (*a*) *houttuyni* Walbaum, 1792, as published in the combination *Esox Houttuyni;*
  (*b*) *imperialis* Rafinesque, 1810, as published in the combination *Esox Imperialis;*
  (*c*) *marisrubri* Bloch & Schneider, 1801, as published in the combination *Esox belone* Var. *Maris rubri;*
(3) place the following names on the Index of Rejected and Invalid Specific Names in Zoology:
  (*a*) *acus* Lacépède, 1803, as suppressed under (1) (*a*);
  (*b*) *argalus* Lesueur, 1821, as suppressed under (1) (*b*).

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